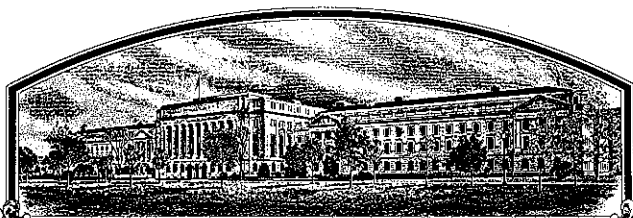


No.



9300264

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**MBS Seed, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (AT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'822'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of September in the year of our Lord one thousand nine hundred and ninety-three.

Attest:

*Kenneth H. Evans*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Mike Egan*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

<b>1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)</b>  <b>MBS SEED, INC.</b>		<b>2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.</b>  <b>EXP. 1422</b>	<b>3. VARIETY NAME</b>  <b>822</b>
<b>4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP)</b>  <b>P.O. BOX 2939 DENTON, TEXAS 76202</b>		<b>5. PHONE (include area code)</b>  <b>817 387 2701</b>	
<b>6. GENUS AND SPECIES NAME</b>  <b>Triticum aestivum L.</b>		<b>7. FAMILY NAME (Botanical)</b>  <b>GRAMINEAE</b>	
<b>8. CROP KIND NAME (Common Name)</b>  <b>WHEAT</b>		<b>9. DATE OF DETERMINATION</b>  <b>SEPT. 10, 1991</b>	
<b>10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)</b>  <b>CORPORATION</b>		<div style="border: 1px solid black; padding: 5px;"> <b>FOR OFFICIAL USE ONLY</b>  <b>VPVO NUMBER</b>  <div style="font-size: 1.5em; text-align: center;">9300264</div> <hr/> <b>F I L I N G</b>  Date <u>JULY 19, 1993</u>  Time <u>12:30</u> <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.  <hr/> <b>F E E S</b>  Filing and Examination Fee: \$ <u>2325.00</u>  Date <u>JULY 19, 1993</u>  Certificate Fee: \$ <u>275.00</u>  Date <u>Aug. 26, 1993</u> </div>	
<b>11. IF INCORPORATED, GIVE STATE OF INCORPORATION</b>  <b>TEXAS</b>			
<b>12. DATE OF INCORPORATION</b>  <b>AUG. 29, 1989</b>			
<b>13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS</b> <b>JAMES W. MATLOCK, PRESIDENT</b> <span style="float: right;"><b>817 387 2701</b></span> <b>MBS SEED, INC.</b> <b>P.O. BOX 2939</b> <b>DENTON, TEXAS 76202</b>			
<b>14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)</b>			
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety. b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety. d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership. f. <input checked="" type="checkbox"/> Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office <b>7-16-93 UNDER SAME COVER</b> g. <input checked="" type="checkbox"/> Filing and Examination Fee <del>(\$2,325)</del> made payable to "Treasurer of the United States." <b>(\$2,325) CHECK NO. 1786 ENCLOSED</b>			
<b>15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)</b> <input type="checkbox"/> YES (If "YES," answer items 16 and 17 below) <input checked="" type="checkbox"/> NO (If "NO," skip to item 18 below)			
<b>16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?</b> <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
<b>18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?</b> <input type="checkbox"/> YES (If "YES," through <input type="checkbox"/> Plant Variety Protection Act <input type="checkbox"/> Patent Act. Give date: _____ ) <input checked="" type="checkbox"/> NO			
<b>19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?</b> <input checked="" type="checkbox"/> YES (If "YES," give names of countries and dates) <b>U.S. SEPTEMBER, 1992</b> <input type="checkbox"/> NO			
<b>20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.</b> The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
<b>SIGNATURE OF APPLICANT [Owner(s)]</b> 		<b>CAPACITY OR TITLE</b> <b>President</b>	
<b>SIGNATURE OF APPLICANT [Owner(s)]</b>		<b>DATE</b> <b>7-16-93</b>	

**EXHIBIT A**  
**ORIGIN AND BREEDING HISTORY OF THE VARIETY**

The hard red winter wheat variety '822' is derived from a cross Siouxland/812 made in the Northrup King Co. breeding nursery at Yuma, Arizona during the 1980-81 winter season. The pedigree of the variety is N43584-0A-0K-3T-0T. The F1 and F2 populations were grown at Yuma during the 1981-82 and 1982-83 seasons respectively. Selection in the F2 was done by a modified mass selection technique, whereby heads of the taller plants were cut off soon after they had emerged from the boot. Thus the population was skewed toward short plant height. After harvest, the F3 seed was passed over a gravity table for selection of the heavier kernels. The F3 was planted as a bulk at Pratt, Kansas in the 1984-85 season. The F4 seed harvest here was passed over a gravity table to eliminate the lighter kernels from the bulk. The F4 generation was then grown near the Dallas, Texas area in the 1985-86 season as an entry in a preliminary yield trial.

Head selections were made in this F4 bulk population and the F5 seeds from these were grown as head-rows in the Dallas, Texas area for agronomic evaluation in 1986-87. The F6 seed from an individual F5 head-row was harvested in bulk and subsequently grown at Yuma, Arizona for increases in the 1987-88 and 1988-89 seasons. There was no increase in the 1989-90 season. The selection of the F5 head-row that was the origin of the variety was based on progeny selection in subsequent generations. The variety has been maintained as a pure line increase from this source.

In 1990-91, the variety was tested and increased in Texas. This production was field inspected and approved by the Texas Department of Agriculture as a class of Foundation seed pending the Texas Plant Board approval of the new variety. Based on promising agronomic performance in 1991, it was tested and increased again in 1992. In the fall of 1992, seed was distributed to growers for the production of all classes of seed.

Variety '822' is a stable and uniform variety. No characteristic variations have been noted in the last two years of production in Texas.

**EXHIBIT B**  
**NOVELTY STATEMENT**

Variety '822' is most like '814, but differs in that the leaves of variety '814' have a purple auricle at the boot stage, whereas the auricles on the leaves of variety '822' is white.

The variety '822' has better resistance to Powdery Mildew than the variety '814' (see exhibit D).

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
COMMODITIES SCIENTIFIC SUPPORT DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

MBS SEED, INC.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

P.O. BOX 2939

DENTON, TEXAS 76202

FOR OFFICIAL USE ONLY

PVPO NUMBER

9300264

VARIETY NAME OR TEMPORARY  
DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g., 0 8 9 or 0 9 ) when number is either 99 or less or 9 or less.

## 1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

## 2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 2 1 = SOFT 3 = OTHER (Specify)  
2 2 = HARD

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

## 3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

1 2 2 FIRST FLOWERING 1 2 5 LAST FLOWERING

## 4. MATURITY (50% Flowering):

0 4 NO. OF DAYS EARLIER THAN ..... 1 SIOUXLAND 812  
1 = XXXXX 2 = XXXXX 3 = CHRIS  
0 3 NO. OF DAYS LATER THAN ..... 2 4 = LEMHI 5 = NUGAINES 6 = LEEDS

## 5. PLANT HEIGHT (From soil level to top of head):

0 8 4.5 CM. HIGH  
1 3 CM. TALLER THAN ..... 1 SIOUXLAND 812  
1 4 CM. SHORTER THAN ..... 2 1 = XXXXX 2 = XXXXX 3 = CHRIS  
4 = LEMHI 5 = NUGAINES 6 = LEEDS

## 6. PLANT COLOR AT BOOTING (See reverse):

2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

## 7. ANTHR COLOR:

1 1 = YELLOW 2 = PURPLE

## 8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Vaxy bloom: 1 = ABSENT 2 = PRESENT  
1 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT 1 Internodes: 1 = HOLLOW 2 = SOLID  
0 4 NO. OF NODES (Originating from node above ground) 1 5 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

## 9. AURICLES:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 1 Hairiness: 1 = ABSENT 2 = PRESENT

## 10. LEAF:

1 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 1 Flag leaf: 1 = NOT TWISTED 2 = TWISTED  
3 = OTHER (Specify): 2 Vaxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT  
1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT 1 6 MM. LEAF WIDTH (First leaf below flag leaf) 1 1 CM. LEAF LENGTH (First leaf below flag leaf):

## 11. HEAD:

☐ 1 Density: 1 = LAX 2 = DENSE☐ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE  
4 = OTHER (Specify) \_\_\_\_\_☐ 4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED☐ 2 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED  
5 = BROWN 6 = BLACK 7 = OTHER (Specify) \_\_\_\_\_☐ 1 ☐ 4 CM. LENGTH☐ 1 ☐ 5 MM. WIDTH

## 12. GLUMES AT MATURITY:

☐ 2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)  
3 = LONG (CA. 9 mm.)☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)  
3 = WIDE (CA. 4 mm.)☐ 2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED  
4 = SQUARE 5 = ELEVATED 6 = APICULATE☐ 2 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

## 13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

## 14. SEEDLING ANTHOCYANIN:

☐ 1 1 = ABSENT 2 = PRESENT

## 15. JUVENILE PLANT GROWTH HABIT:

☐ 1 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

## 16. SEED:

☐ 3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL☐ 1 Check: 1 = ROUNDED 2 = ANGULAR☐ 2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED☐ 6 Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN  
4 = BROWN 5 = BLACK 6 = BROWN-BLACK☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) \_\_\_\_\_☐ 0 ☐ 7 MM. LENGTH☐ 0 ☐ 3 MM. WIDTH☐ 3 ☐ 3 GM. PER 1000 SEEDS

## 17. SEED CREASE:

☐ 1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'  
2 = 80% OR LESS OF KERNEL 'CHRIS'  
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'☐ 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'  
2 = 35% OR LESS OF KERNEL 'CHRIS'  
3 = 50% OR LESS OF KERNEL 'LEMHI'

## 18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 STEM RUST (Races) \_\_\_\_\_☐ 0 LEAF RUST (Races) \_\_\_\_\_☐ 0 STRIPE RUST (Races) \_\_\_\_\_☐ 0 LOOSE SMUT☐ 2 POWDERY MILDEW☐ 0 BUNT☐ OTHER (Specify) \_\_\_\_\_

## 19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 1 SAWFLY☐ 0 APHID (Bydv.)☐ 0 GREEN BUG☐ 0 CEREAL LEAF BEETLE☐ 0 OTHER (Specify) \_\_\_\_\_HESSIAN FLY  
RACES:☐ 0 GP☐ 0 A☐ 0 B☐ 0 C☐ 0 D☐ 0 E☐ 0 F☐ 0 G

## 20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	814	Seed size	812
Leaf size	STIOUXLAND 89	Seed shape	812
Leaf color	STIOUXLAND 89	Coleoptile elongation	814
Leaf carriage	814	Seedling pigmentation	814

## INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form.

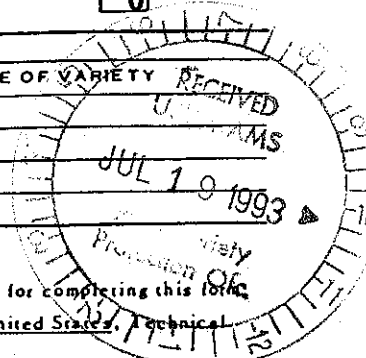
(a) L. W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.(b) W. E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

EXHIBIT D  
ADDITIONAL DESCRIPTION OF THE VARIETY

Variety '822; is a semi-dwarf hard red winter wheat adapted to Texas environments. It heads roughly at the same time as the varieties Chisholm, Mesa and Quantum 577.

Comparative disease reactions are shown below:

Year Location Variety	Leaf Rust % IT	Powdery Mildew (0-9)	Barley Yellow Dwarf (0-9)
<b>1991</b>			
Northern Blackland (3 locs.)			
822	60MS-S	0.0	
814	65S	1.0	
812	10MS	5.7	
Siouxland 89	93S	0.0	
TAM 107	100S	0.0	
<b>1992</b>			
Dallas			
822	100S	0.0	4.0
814	60S	3.7	1.3
812	40MR	4.7	1.3
Siouxland 89	100S	0.0	1.0
TAM 107	100S	0.0	1.0

The following comparative mixograph quality data on the 1992 crop was provided by Farmer's Elevator of Dawn, Inc., Canyon, Texas:

Trait <i>→ strike over gum</i>	Variety	
	822	814
Grain Protein	15.0%	15.2%
Flour Protein	14.1%	14.6%
Absorption	62.0%	62.0%
Mixing Time	2.4 min.	2.5 min.
Tolerance	4.0 min.	4.5 min.
Overall Rating	Good+	Good +

## EXHIBIT E

## STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

Wheat variety '822' was developed by the Northrup King Co. cereals breeding staff from the germplasm sources and procedures cited in Exhibit A of this application. Ownership of this variety was transferred to MBS Seed, Inc. of Denton, Texas in an agreement signed on October 15, 1990. MBS Seed, Inc. believes that the variety is novel as defined by Plant Variety Protection Act and, therefore, that MBS Seed, Inc. is the sole owner of the variety.